

To help decrease air pollution in the southeastern portion of Wisconsin, the Department of Natural Resources (DNR) created a regulation to control volatile organic compound (VOC) emissions from motor vehicle refinishing operations. VOCs have been found to be a primary precursor to the formation of bad ozone (smog). The complete rule can be found in section NR 422.095 of the Wisconsin Administrative Code (Wis. Adm. Code).

## ***Does This Rule Affect My Business?***

It depends on what type of business you operate and where you're located. If you operate one of the types of motor vehicle refinishing operations listed below **and** your business is located in the ozone nonattainment area, your business will be affected by this rule.

- Auto body and repair shops;
- Fleet operator repair & paint shops;
- Production paint shops;
- New & used motor vehicle dealer repair and paint shops;
- Any facility classified under SIC 7532, including dock repair of imported vehicles and dealer repair of damage during transport.

The ozone nonattainment area covers the southeast shoreline of Lake Michigan.

Affected counties include:

<b>Kenosha</b>	<b>Kewaunee</b>	<b>Manitowoc</b>
<b>Milwaukee</b>	<b>Ozaukee</b>	<b>Racine</b>
<b>Sheboygan</b>	<b>Washington</b>	<b>Waukesha</b>

## ***Any Exemptions to This Rule?***

The following are exempt from this rule:

1. Facilities using less than 20 gallons per year of coating as applied for motor vehicle refinishing are exempt from using the specified application equipment and gun cleaning device described on page two of this summary. The rest of the regulation still applies.
2. Touch-up coatings are exempt from the entire regulation. These are coatings applied

by brush or hand held, non-refillable aerosol spray cans.

3. Educational facilities are exempt from keeping records of the amount and category of each coating purchased. The other record-keeping requirements described on page three, along with the rest of the regulation, must still be followed.

## ***How Does My Business Comply With This Regulation?***

There are four areas in which affected businesses must comply. An explanation of each type of compliance requirement is included in this summary. The four areas include:

- 1. Initial Notification Report**
- 2. Emission Limits**
- 3. Application Equipment Standards**
- 4. Recordkeeping Requirements**

### **1. Initial Notification**

Owners or operators of all existing motor vehicle refinishing operations should have already notified the Department of Natural Resources (DNR) that they are affected by this regulation. New refinishing operations must notify the DNR within 30 days of startup.

Notification is simple. Write a letter to the DNR and include: the name, address and phone number of your facility where refinishing operations are taking place; and the name and phone number of the person at your facility who is responsible for having your business

comply with this rule. The notifications should be sent to the Bureau of Air Management, Small Business Section, P.O. Box 7921, Madison, WI 53707-7921.

## 2. Emission Limits

All affected facilities must use coatings that meet the following volatile organic compound limits, **as applied, excluding water**:

Coating Category	Maximum VOC content allowed in the coating, in kilograms/liter or pounds/gallon
Pretreatment coat	0.78 kg/liters or 6.5 lbs/gal
Precoat	0.66 kg/liters or 5.5 lbs/gal
Primer/primer surface	0.58 kg/liters or 4.8 lbs/gal
Primer sealer	0.55 kg/liters or 4.6 lbs/gal
Topcoat or base-coat/clear-coat system	0.60 kg/liters or 5.0 lbs/gal
Three or four stage top-coat system	0.63 kg/liters or 5.2 lbs/gal
Specialty coatings	0.84 kg/liters or 7.0 lbs/gal

In addition, surface preparation products for use on metal substrates have a limit of 0.17 kilograms/liter (1.4 lb/gal) as applied. Surface preparation products for use on plastic substrates have a limit of 0.78 kilograms/liter (6.5 lb/gal), as applied.

The following averaging formula must be used to calculate the VOC content of a base-coat/clear-coat application system:

$$VOC_{b/c} = [VOC_b + 2(VOC_c)]/3$$

✓  $VOC_{b/c}$  is the "as applied" VOC content of a base-coat/clear-coat system in kg/liters or lbs/gal excluding water.

✓  $VOC_b$  is the "as applied" VOC content of the base coat used in kg/liters or lbs/gal excluding water.

✓  $VOC_c$  is the "as applied" VOC content of the clear coat used in kg/liters or lbs/gal excluding water.

A similar calculation is used for a three- or four-stage application system. Contact the DNR or the Small Business Clean Air Assistance Program (SBCAAP) for assistance with the calculations.

## 3. Application Equipment Standards

Any facility that does not fall under the 20 gallon per year exemption must meet the following equipment standards:

### Application Equipment

- Electrostatic application equipment; or
- Low pressure spray application equipment (e.g. high volume low pressure (HVLP) or low volume, low pressure LVLP spray guns).

### Cleanup Equipment

- Spray guns and paint lines must be cleaned with a device that recirculates or reuses solvent and collects the solvent in a closed container.
- All VOC containing material, including rags, must be stored in a closed container.

**Note:** Facilities that are not required to use a "gun cleaning device" must collect the cleaning solvent in a closed container.

## 4. Recordkeeping

Each affected business must keep the necessary records on-hand for five years. What type of records must you keep?

- 1 Monthly records of the amount and category of each coating purchased. (Categories are the types of coatings listed under the "emission limits" section.)
- 2 A unique name or identification number for each coating.
- 3 The VOC content of each coating, in units of pounds (or kilograms) of VOC per gallon (or liters) of coating **as applied, excluding water**. Because the ratio of coating, thinner and catalyst may vary, we recommend you use a calculation representing the maximum possible VOC content, based on the materials you use or make the appropriate adjustments to your calculations as your mixtures change.

Calculating the VOC content, **as applied, excluding water** is rather complex. You need a number of items from the MSDS to calculate the lb VOC/gal, excluding water.

- ☐ Water content, in percent by weight (% by wt) (we will use 5%)

- ☐ Total Volatile content, in percent by weight (% by wt) (Using 40% VOC + 5% water = 45% from above example.)
- ☐ Density of coating, in pounds per gallon (lb/gal) (using 14 lb/gal from above example)
- ☐ Density of water = 8.34 pounds per gallon

Once you have the items listed above, you calculate the “pounds VOC per gallon coating applied, excluding water” for each coating used as follows:

The value of **6.11 lb VOC per gallon, excluding water**, is what you would record after using that calculation for each of your coatings to show that you meet the VOC content limit.

1. <i>Water in coating:</i>			
14 lb coating	x 5 lb water	=	0.70 lb H <sub>2</sub> O
gal coating	100 lb coating		gal ctg
2. <i>Volume water in coating:</i>			
0.7 lb water	/ 8.34 lb water	=	0.084 gal H <sub>2</sub> O
gal coating	gal water		gal ctg
3. <i>Mass of VOC in coating:</i>			
45% volatile - 5% water = 40% VOC			
14 lb coating	x 40 lb VOC	=	5.6 lb VOC
gal coating	100 lb coating		gal ctg
4. <i>lb VOC per gallon, less water:</i>			
5.6 lb VOC	/ (1-0.084) gal -H <sub>2</sub> O	=	6.11 lb VOC
gal coating	gal coating		gal - H <sub>2</sub> O

## Are There Permit Requirements?

If you are required to meet the motor vehicle refinishing RACT rule, you may also need a construction or operation permit.

## The Exemption from Permit Requirements

In 2000, the DNR added a new exemption to the air permit requirements so that smaller refinishing operations would not be caught up in the permit application process. There are two application processes for air permits: construction permits for any new units or expansions; or, operation permits for existing facilities that have not made any changes since 1979.

The specific permit exemption level is 1,666 pounds of VOCs per month, prior to entering any control device. This number reflects a facility's ACTUAL emissions, based on the amount of VOC containing material actually used. This amount can never be exceeded or the exemption will no longer apply and an air permit would be necessary.

Refer to the “**VOC Emissions Sources and Air Pollution Construction Permits**” fact sheet provided by the SBCAAP for information on how to calculate the monthly exemption level. If you meet the exemption level for any **new** paint booth or coating system project, you are exempt from needing a construction permit. If you meet the exemption level for your whole existing coating system, then you are exempt from needing an operation permit. If you are not exempt from the permit requirements, contact the DNR or the SBCAAP for assistance in completing the application forms.



## Contacts for More Information or Assistance.

The Small Business Clean Air Assistance Program helps smaller businesses understand and comply with the Clean Air Act regulations. Contact one of the program's Clean Air Specialists for more assistance: Renée Lesjak Bashel at 608/264-6153 or Tom Coogan at 608/267-9214.



For further information on the motor vehicle refinishing RACT contact your DNR Regional or Service Center office shown on the **DNR Contact Fact Sheet** or the DNR's Central office at 608/267-7541.